Operating System
(DeTOS)

Administration Manual

Notes, Cautions, and Warnings

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

Information in this publication is subject to change without notice.

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Introduction

What is DeTOS?

Acer Terminal Operating System (DeTOS) is an embedded Thin Client Operating System designed to be simple, secure, and centrally manageable. DeTOS can be used to access hosted desktops using Microsoft Remote Desktop Services, VMware View, Citrix XenApp or XenDesktop, web-based applications, and more.

DeTOS Features

- **Simple-**Configuring a session out of the box is quick and painless using the DeTOS intuitive web based control panel. The same control panel can be used either locally from the thin client or remotely from the management software.
- **Modern-**DeTOS can connect to hosted desktops using the industry's best protocols including PCoIP, Citric ICA Client, Citrix XenDesktop, rDesktop (RDP) or Windows Terminal Services, and VMware View Client. DeTOS also includes a built-in browser that allows accessing web-based applications or kiosk usage.
- **Centrally Managed-**DeTOS-based terminals can be centrally managed using Acer Echo Management Console.
    - Echo is shipped as a virtual appliance, so it is easy to set up.
    - Echo can automatically discover and inventory the thin clients on your network.
    - Echo has the concept of a default profile. Using a default profile, additional thin clients are automatically configured when you plug them into your network.

- Echo allows individual profiles for different users, including specific Connections, Thin Client Settings, Passwords, and Customizable Desktop Icons.
- Echo allows you to update the thin client's embedded OS. Updates can be scheduled to happen outside of production hours, for example over the weekend.

DeTOS Installation

No installation is required for customers who have purchased DeTOS based thin clients from Acer. Your thin client already contains a factory installed DeTOS operating system. A USB re-flash utility is available if you need to reinstall the operating system at any point in the future.

Visit **acer global download center** to download the USB re-flash utility tool for reinstalling the operating system for Acer terminals.

First Boot Wizard

The first time your terminal boots up, you will be taken through a first boot wizard. This wizard can help you to configure a variety of settings in order to better utilize your terminal. It is advised that you are familiar with the material in this guide as well as the Echo Administration Guide to best utilize the first boot wizard.

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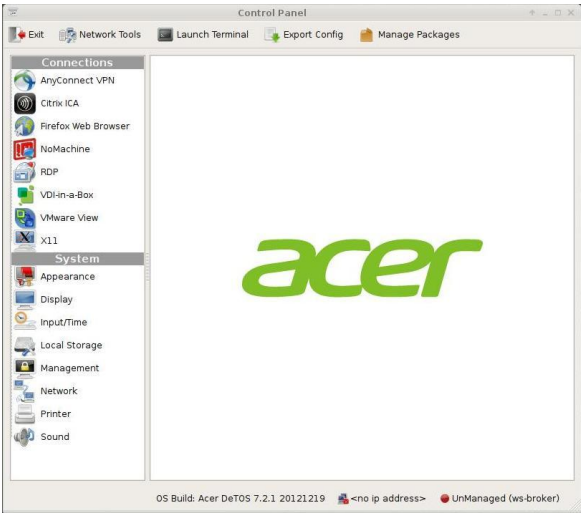
Getting Started

After the initial bootup, or when booting up after having selected the **Reset to Factory Settings**, your thin client will ask if you wish to run as a Devon Zero™ client, or as a thin client console running DeTOS. If running in Devon Zero™ mode, see the section titled "Devon Zero™" in the "Advanced Options" chapter to continue. If you chose to operate your thin client using DeTOS instead, you will be shown the DeTOS desktop and taskbar. To get started, do the following:

- Check that your thin client is connected to the network.
- If you have set up a management server in your network, check that the thin client was able to contact the management server and is in managed mode.
- Create a desktop shortcut to allow thin client users to get connected to a remote server. (See Chapter 6, "Connections," for more information.)

To check the network connection status, click the **DeTOS** button and then select **Control Panel**.

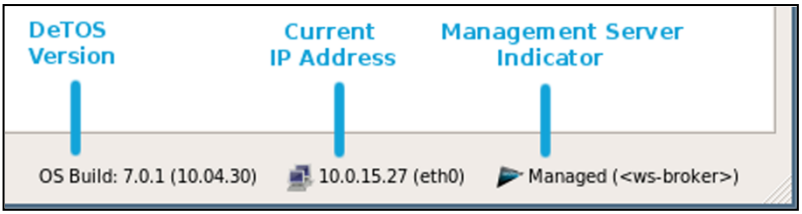


Along the bottom of the **Control Panel** is a row of status messages. These messages include the DeTOS build number, the terminal's current IP address, and a Thin Client Management Connection Indicator.

DeTOS default factory setting is DHCP. If you have a DHCP server on your network, the status bar should show the leased IP address. If you want the thin client to use a fixed IP address please refer to this guide's network section. A message of no ip address will appear if network connectivity is lost or was never established in the first place. This may be related to a loose or faulty network cable. It may also be an indication of DHCP issues. If you need to troubleshoot a network issue, please refer to the network diagnostic section below.

Along with the IP address, the **Control Panel** status section also shows you whether your thin client is in managed or unmanaged (stand alone) mode. By default, DeTOS based terminals try to locate a management server. If a management server is found, the terminal switches to managed mode, where it “pulls” its configuration from the management server. If not, it will stay in standalone/unmanaged mode and use its local configuration.

The **Control Panel** status area also shows the OS build. This is a string based on the DeTOS version and the build date, using the following format: *7.x.x (YY.MM.DD)*



Management Server Splash Screen

During bootup, if the terminal cannot make contact with a Management Server, then a black splash screen will appear just prior to the DeTOS desktop loading. This screen contains the Acer logo and displays a message saying, Attempting to connect to Management Server. The splash screen will be displayed until successful contact is made with a management server, the cancel button is pressed, or the specified timeout (30 seconds by default) is reached.

The **Management** section, found under the **Control Panel**, allows you to configure the behavior of this splash screen. Configuration options include:

- Setting the terminal to **Managed** or **Unmanaged** modes.
- Specifying a different management server address
- Adjusting the timeout value
- Enabling or disabling the splash screen **Cancel** button

Management Server Indicator

Once you are on the DeTOS Desktop, the Echo Agent running on your terminal will continue to periodically contact a Management Server named ws-broker on your local area network. When successful, the Management **Server Indicator** box found along the bottom of the **Control Panel** will read Managed. Otherwise, the icon will change to a red circle and the status will say Unmanaged. In this case, verify that your management server is online and accessible on your LAN. Also be sure to check your DNS server to verify that an entry for ws-broker exists and points to the IP address of your management server.

Control Panel

The **Control Panel** is the local tool for configuring **Connection and System** settings on your thin client.

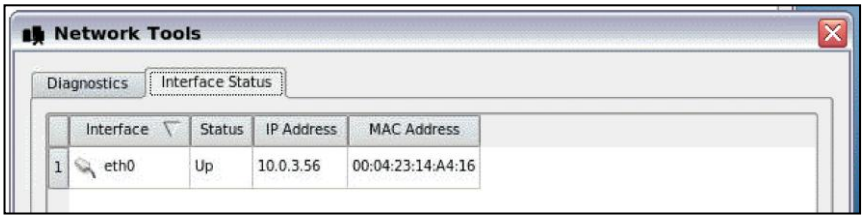
- **Connection Settings -** Your terminal has the ability to connect to remote servers utilizing several types of protocols. The rDesktop client uses the RDP protocol and allows you to connect to Microsoft Windows Terminal Servers. The Citrix ICA client is used to establish connections to Citrix Presentation and XenApp servers. The VMware View client allows you to connect to a VMware View server, which in turn, provides the end-user with their own virtual desktop session. Lastly, you may create a Firefox web browser connection to surf the web. This can be used for several purposes:
    - Connect to a web applications; e.g., a webmail server.
    - Connect to a connection broker web interface; e.g., Citrix XenDesktop.
    - Use the thin client as a Kiosk (select the **Enable Kiosk Mode** button under the **Kiosk Mode** panel)
- **System Settings -** These are the display, sound, keyboard, mouse, printer and date/time configurations for your terminal. Also under the System section is the ability to set an administrative password for the control panel and change the local storage mode.

Network Tools

The toolbar along the top of the **Control Panel** window contains a button named **Network Tools**. Clicking this button will open a separate, smaller window that provides you with current network status and useful diagnostic programs.

Interface Status

Click the **Interface Status** tab along the top of the **Network Tools** window to view the IP address that is currently assigned to this terminal. The MAC Address for this machine is also reported on this screen.



Diagnostics

If you are experiencing difficulty connecting to servers on certain segments of your LAN, then you may want to use the ping command to verify you are reaching specific servers and/or gateways on the subnet in question. To use ping:

1. Select the **Diagnostics** tab from the **Network Tools** window.
2. In the **Host Address** field, type in the IP address or website you want to test against and then press the **Ping** button.

Network Tools
Diagnostics
Interface Status
Host Address:
www.google.com
Ping
PING www.l.google.com (64.233.169.147) 56(84) bytes of data.
64 bytes from yo-in-f147.google.com (64.233.169.147): icmp_seq=1 ttl=244 time=12.0 ms
64 bytes from yo-in-f147.google.com (64.233.169.147): icmp_seq=2 ttl=244 time=27.6 ms
64 bytes from yo-in-f147.google.com (64.233.169.147): icmp_seq=3 ttl=244 time=11.9 ms

3. If there is an error in the delivery to the destination, the ping command displays an error message. Otherwise, replies will continuously display for each packet successfully sent and received.
4. Press the Stop button to terminate the ping loop.

Echo Agent System Information

Echo Management- Displays the current status and information of the Echo Management server to which your thin client is connected.

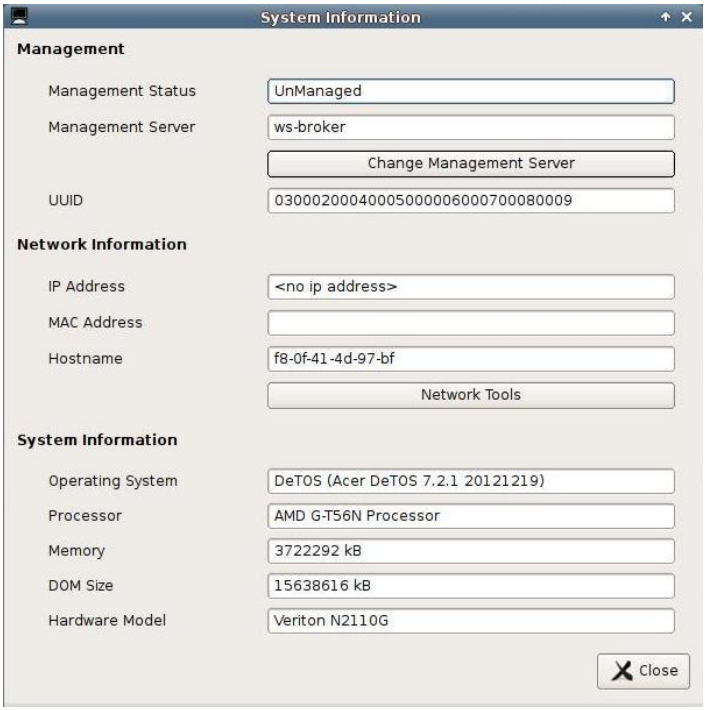
- **Management Status**-Displays when the thin client is being managed by an Echo server.
- **Management Server**-Displays the current address of the Echo server.
- **Change Management Server**-Allows you to change the Echo server.
- **UUID**-Displays the current UUID assigned to the terminal.

Network Information-This displays information about the current network connection.

- **IP Address**-Displays the current IP address assigned to the thin client.
- **MAC Address**-Displays the current MAC address assigned to the thin client.
- **Hostname**-Displays the name assigned to the thin client.
- **Network Tools**-Allows you to run diagnostics test with the network connection and to check on the current status of the network connection.

System Information-Displays information about the operating system and the thin client.

- **Operating System**-Displays the name of the image or operating system that is in use.
- **Processor**-Displays the processor that the thin client is using.
- **Memory**-Displays the total internal memory of the thin client.
- **DOM Size**-Displays the total storage capacity size of the thin client.
- **Hardware Model**-Displays the name of the thin client in use.


System Information
Management
Management Status
UnManaged
Management Server
ws-broker
Change Management Server
UUID
03000200040005000006000700080009
Network Information
IP Address
<no ip address>
MAC Address
Hostname
f8-0f-41-4d-97-bf
Network Tools
System Information
Operating System
DeTOS (Acer DeTOS 7.2.1 20121219)
Processor
AMD G-T56N Processor
Memory
3722292 kB
DOM Size
15638616 kB
Hardware Model
Veriton N2110G
Close

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Persistence

Persistence, within the scope of thin client computing, refers to the continuing existence of connections and settings after a terminal has been rebooted.

Default Behavior

By default, or after resetting your terminal to default factory setting, DeTOS is set to persistent mode. This means that any configuration change you make will persist across reboots. You can change this to a stateless mode where the thin client settings and connections are dynamically "pulled" from the management server, or a snapshot mode where you define the desired configuration and prevent users from making any changes. These options are all configured in the **Control Panel**, under the **System Settings**, in a section called **Local Storage**.

Persistence in DeTOS Thin Clients

There are two strategies for achieving persistence on DeTOS-based thin clients.

Strategy #1: Maintain Profiles via Remote Management Server

DeTOS thin clients can be centrally managed using the Acer Echo Management Console. Using Echo, administrators can create several connections and settings and then group them together to form one single collection called a profile. This profile can then be pushed or assigned to one or more thin clients. With your profile properly configured, each time a terminal is booted up and discovered by Echo, all connections and system settings according to its assigned profile are immediately applied – or *pushed* out – to that terminal.

Strategy #2: Allow Configurations to be Stored Locally on the Thin Client

The second approach for achieving persistence is to allocate a specific area of the local DOM (disk) for reading and writing system settings and connections. DeTOS allows for even greater flexibility by offering two variations of this strategy:

- **Enable Local Storage-**While running in this mode, DeTOS will write to the local DOM each and every time configurations are added, deleted or modified under the Control Panel.
- **Enable Snapshot Storage-**When this mode is selected, DeTOS allows writes to the local DOM, but in a more finely controlled manner. An administrator can configure the settings and then store the current configurations to the DOM by clicking **Take Snapshot**. The only settings and connections that will persist across reboots are the ones captured during the snapshot. The terminal essentially falls back into a non-persistent operating mode after the snapshot and discards any new configurations from here on out – until the administrator clicks **Take Snapshot** again, and a new snapshot is used as the primary configuration. In some ways, this mode can be thought of as a hybrid of the standard Enable Local Storage and No Local Storage modes.

Case Examples

The **Local Storage** section of the **Control Panel** allows you to use three methods for local storage:

- **No Local Storage**
- **Enable Local Storage**
- **Enable Snapshot Storage**

These case examples are provided below to help you decide which of these three options will work best for you.

Case 1: "I do not want any users to mess up the thin client's configuration. I am currently using, or plan to use, Acer Echo Management Console to centrally manage my thin client."

Solution: You will be utilizing strategy #1, as described earlier. Choose the **No Local Storage** option on the thin client and make sure you have an Echo server properly configured and accessible on your LAN. With persistence disabled, the thin client becomes stateless and relies completely on the management server for all its configurations.

Case 2: "I simply want the thin client to maintain its configuration settings locally. I do not want to rely on a management server."

Solution: Choose the **Enable Local Storage** radio button option. While running in this mode, DeTOS will write to the local DOM (disk) each and every time configurations are added, deleted, or modified. A remote management server is not needed.

Case 3: "I like the idea of having a non-persistent terminal with an assigned profile, but do not want to use Acer Echo Management Console to manage my terminals. What's the alternative?"

Solution: Choose the **Enable Snapshot Storage** radio button option, press **Apply**, and then reboot the terminal. Next, configure the terminal as desired, and then press the **Take Snapshot** button. From then on, the thin client will use the same exact configuration as when the snapshot was taken – even after being rebooted. A remote management server is not needed.

NOTE: If you would like to change your configuration later, you will have to press the **Take Snapshot** button again to save all of the changes made to your terminal. Upon reboot, your terminal will load whichever Snapshot was is currently being used. Pressing the **Clear Local Storage** button will ask the terminal to clear all connections and settings saved locally, clear the current snapshot used for the reboot, and restore itself to factory settings on the next reboot.

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System Settings

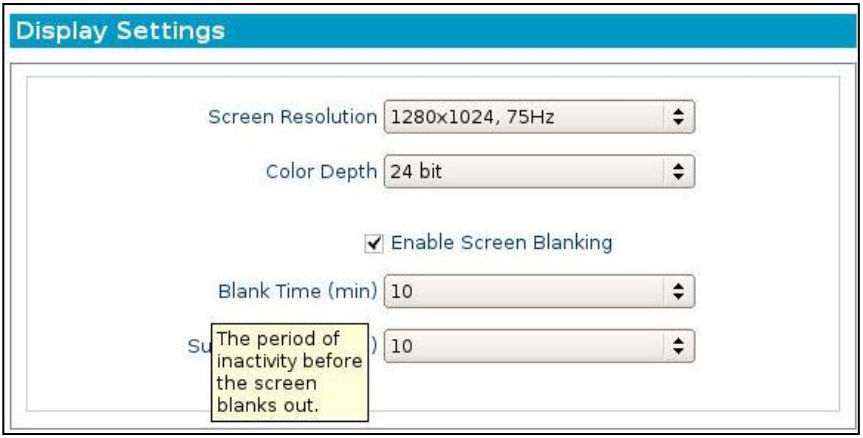
Display Settings

Strategy #1: Maintain Profiles via Remote Management Server

This section describes the display options available for a single monitor attached to a terminal.

1 From the DeTOS desktop, select **DeTOS→Control Panel**.

2 Click the **Display** icon on the left-hand side of the **Control Panel**, under **System Settings**.



- **Screen Resolution-**Select the desired resolution from the dropdown list OR select **Auto-detect** to allow DeTOS to automatically choose the best resolution for the attached monitor.

- **Color Depth-**All supported color depths for your monitor will be listed in this dropdown box.
- **Enable Screen Blanking-**Checking this box will reveal two timeout values for screen blanking and suspend time.

Once you are finished, press the **Apply** button for the changes to take effect. If you selected **Auto-Detect** for the screen resolution, then the change in resolution will occur on next reboot. Otherwise, all other display changes will take effect immediately.

Dual Monitors

This section describes how to set up and configure dual monitors for terminals that support them

1 While the unit is turned off, attach both monitors to the thin client.

2 Turn on the thin client.

3 From the DeTOS Desktop, select **DeTOS→ Control Panel**.

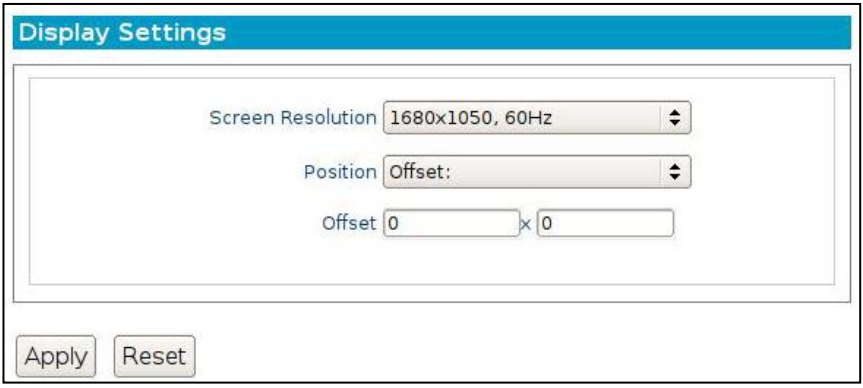
4 Click the **Display** icon on the left-hand side of the **Control Panel**, under System.

5 You will be presented with display settings for **Color Depth** and **Screen Blanking** options. These settings apply to both monitors associated with the two video port.

6 To adjust specific properties for each monitor, click the **Monitors** button along the top of the **Control Panel**. You will then be presented with the names of the two monitors attached to the terminal. The exact names will vary depending on how they are detected on that particular terminal.

(example:VN2110G)

7 Click one of the monitor names from the list. This will open a configuration screen that contains **Screen Resolution**, and **Position**, properties for that specific monitor.



- **Screen Resolution-**Select the desired resolution from the dropdown list OR select **Auto-detect** to allow DeTOS to automatically choose the best resolution for the attached monitor.
- **Position**
  - **Left of** or **Right of** -If your monitors are positioned in a side-by-side arrangement, then you'll want to specify one of the monitors as being to the **Left of** or **Right of** the opposite monitor.
  - **Above** or **Below**-If your monitors are positioned in a top and bottom arrangement, then you'll want to specify one of the monitors as being to the **Above** or **Below** the opposite monitor.
  - **Clone**-Choosing the **Clone** option will cause the display to be duplicated on both monitors. (Also known as "Mirrored.")

NOTE: Left of is the default behavior for dual monitors when powered on for the first time.

  - **Offset**-When you select the offset option, you will be presented with two additional fields for **X** and **Y** coordinates. For example: 50x50 will cause the display to be positioned 50 pixels left of and 50 pixels higher than its normal centered state.

NOTE: The X plane is Horizontal. The Y plane is Vertical.

Once you are finished, press the **Apply** button and reboot the thin client for the changes to take effect.

Input/Time

This section allows you to configure keyboard, mouse, and time settings for the terminal.

1. From the DeTOS Desktop, select **DeTOS→Control Panel**.
2. Select the **Input/Time** icon on the left-hand side of the **Control Panel** under **System**.

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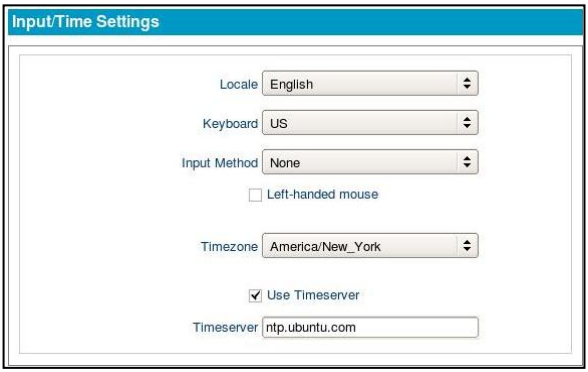


- **Locale-**English is the default locale setting. Switching to a new locale will, upon reboot, adjust the system locale and translate the user interface of the local DeTOS desktop to the selected language.
- **Keyboard-US** is the default keyboard input setting. Switching to a new keyboard input will alter the keyboard mapping immediately after selecting **Apply**.
- **Left-Handed Mouse-**Select this checkbox if you are using a left-handed mouse and need to invert the right and left mouse buttons.

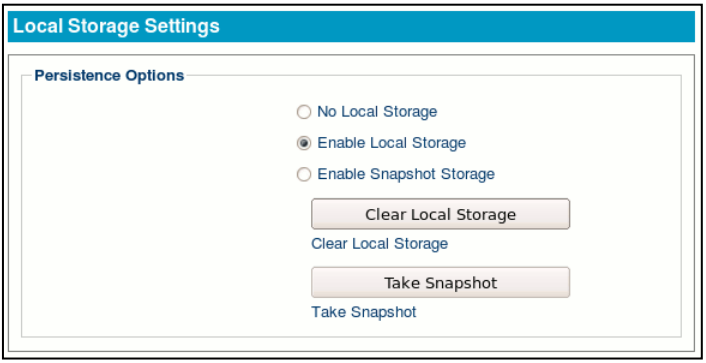
- **Time Zone-**The time zone options are organized geographically by region first and then by city. Select the appropriate time zone for your location.
- **Timeserver-**Defining a timeserver allows the terminal to query an NTP service in order to keep its date and time in sync. By default, this is enabled and set to Ubuntu's timeserver.

Press the **Apply** button for the changes to take effect. Most settings will be changed immediately, but changes to system locale will require a reboot.

Local Storage

The **Local Storage** section of the **Control Panel** allows the administrator to choose one of three modes for how local storage is utilized.

1. From the DeTOS Desktop, select **DeTOS→Control Panel**.
2. Click the **Local Storage** icon on the left-hand side of the **Control Panel** under **System**.



- **No Local Storage-**Selecting this mode disables persistence. The thin client becomes stateless and relies completely on the management server for all its configurations. Be sure to press the **Apply** button and then **reboot** the thin client for this mode to take effect.
- **Enable Local Storage (default)-**While running in this mode, DeTOS will write to the local DOM each and every time

configurations are added, deleted or modified under the Control Panel. Press the **Apply** button and then **reboot** the thin client for this mode to take effect.

- **Enable Snapshot Storage-**To utilize local storage in a profile-like manner. Be sure to press the **Apply** button, and then reboot. Upon reboot, configure the thin client as desired, and then press the **Take Snapshot** button. From now on, the thin client will use the same configuration as when the snapshot was taken – even after reboots.
- **Clear Local Storage-**Press this button to clear-out all settings currently stored in local or snapshot storage. Be sure to reboot the thin client after you pressed this button.
- **Take Snapshot-**While running in a **Snapshot Storage** mode, you may press this button to capture the thin client's current connections and settings configuration. Be sure to reboot the terminal after you pressed this button.

NOTE: No matter which persistence option you select, it is recommended that you password protect the Control Panel to prevent your end-users from accidentally changing the mode.

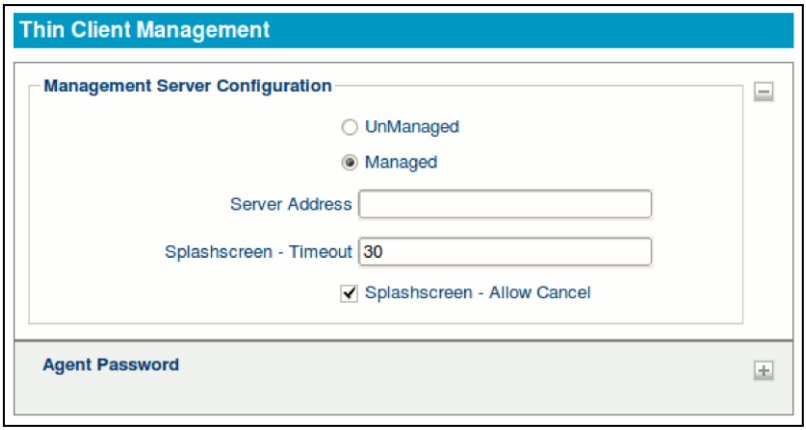
Management

Management Server Configuration

During bootup, if the thin client cannot make contact with a Management Server, then a white splash screen will appear just prior to the DeTOS desktop loading. This screen contains a message saying Attempting to connect to Management Server. The splash screen will be displayed until successful contact is made with a management server, the cancel button is pressed, or the specified timeout (30 seconds by default) is reached. The **Management Server Configuration** screen allows you to configure the behavior of this splash screen, along with other management server options.

1 From the DeTOS Desktop, select **DeTOS→Control Panel**.

2 Click the **Management** icon on the left-hand side of the **Control Panel** under **System**.

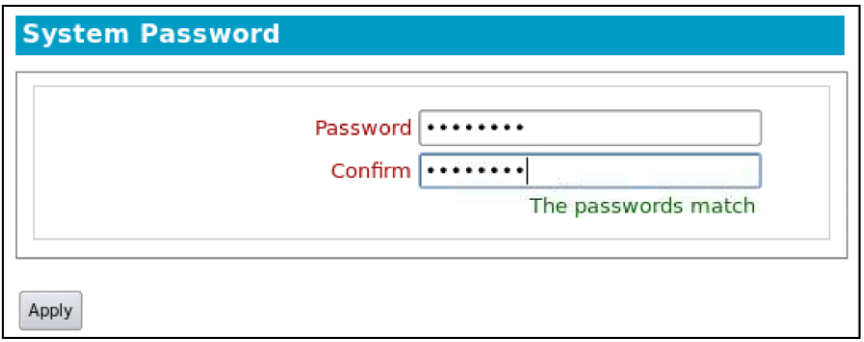


- **Managed/Unmanaged-**By default, the thin client is set to Managed mode and will attempt to make contact with a management server. You have the option of severing all communications with a management server by selecting the **Unmanaged** radio button. Press **Apply** and reboot the thin client for this to take effect.
- **Server Address-**While in managed mode, the thin client will maintain contact with a management server named ws-broker. Use this field to specify a different hostname or IP address for your management server.
- **Splash Screen – Timeout-**Use this field to adjust the number of seconds the splash screen appears on the screen before it times-out and loads the DeTOS Desktop. Enter a value of **0** to bypass the screen altogether.
- **Splash Screen – Allow Cancel-**A **Cancel** button is provided on the splash screen that allows the user to abort the timeout delay. Uncheck this box to hide the cancel button and force the user to wait the required amount of time.

NOTE: The purpose of the splash screen feature is to gracefully handle network latency that may occur during the thin client's first contact with a management server during bootup. This feature becomes vital in the case where you have a management server applying connections to the thin client that are configured to Autostart on bootup.

Agent Password

A System Password can be set to restrict access to the **Control Panel**.



To set the Password:

1. Select **DeTOS→Control Panel**.
2. Click the **Management** icon on the left-hand side of the **Control Panel** under **System**.
3. Select the plus [+] to open the **Agent Password** section of this screen.
4. Enter a password in the password field and re-enter it to confirm your password.
5. Press the **Apply** button to save your password.

NOTE: Once a system password is set, the user will be prompted for the password when they attempt to open the **Control Panel**. If the **Cancel** button is pressed or a user incorrectly types the password, then the **Control Panel** will open in a read-only mode. A small padlock icon will also appear along the bottom of the **Control Panel** window, indicating that edits are not allowed. Keep your password safe!

Network

By default, the thin client attempts to contact a DHCP server on your network during boot up. If you have a DHCP server on your network, then the thin client will acquire an IP address automatically and no further network configuration is required on your part. However, there are additional options available.

Thin clients capable of connecting to wireless networks will still default to a wired connection if available. To change the network for your connection:

1. From the DeTOS Desktop, select **DeTOS→ Control Panel**.
2. Select the **Network** icon on the left-hand side of the **Control Panel** under **System**.
3. Select the desired connection from the **Networks** dropdown menu in the **Networks** section.
4. Click **Apply**.

If you've selected a wireless network, a **Wireless Network** section will appear beneath the **Networks** section. To further configure a wireless connection:

1. Select the authentication method used on your network from the **Authentication** dropdown menu
2. Depending on the authentication method selected, you may have to enter additional information into the fields that appear.
3. When all the required fields have been filled, click **Apply**.

Alternatively, you can now access the connections available to you by utilizing the **Network** tray icon. To connect using the tray icon:

1. Right click on the **Network** tray icon in the lower left corner of the desktop.
2. Select the network desired from the list of available networks that is displayed.
3. Enter your password into the **Password** field in the popup that appears.
4. Click **OK** to connect.

If you need to set a Static IP address on a DeTOS thin client:

1 From the DeTOS Desktop, select **DeTOS→ Control Panel**.

2 Select the **Network** icon on the left-hand side of the **Control Panel** under **System**.

3 Expand the **IP Configuration** section of the **Network Settings** menu.

4 Deselect the **Use DHCP** checkbox.

5 Type in appropriate values for in the address fields if needed and then press **Apply**.

6 Sometimes, depending on your network, it may take 15-20 seconds to reconfigure to the Static IP. This is normal, and a reboot is NOT required.

7 To make any changes to the Host Name, or to add or edit your own DNS servers, edit the **Hostname** field in the **Networks** area found near the top of the window. Press **Apply** when finished to save.

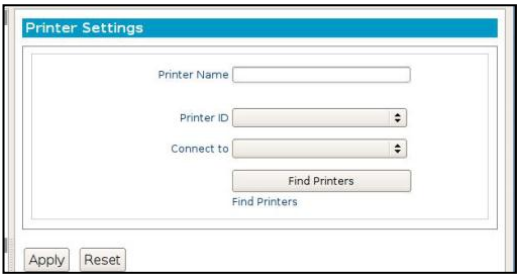
8 When changing your Network settings, this may take 15-20 seconds, depending on your network speed, for your changes to take effect. This is normal and your thin client will NOT need to be rebooted for the changes to take effect.

Printer Settings

DeTOS supports redirected printing to a locally attached USB or Parallel printer. Once the Printer Settings are properly configured and applied, redirected printing will be enabled for all RDP, Citrix ICA, and VMware View connections created on your thin client.

1 From the DeTOS Desktop, select **DeTOS→ Control Panel**.

2 Click the **Printer** icon on the left-hand side of the **Control Panel**, under **System**.



3 Enter the following values:

   a. **Printer Name-**Enter a name for this printer. Do not include spaces.

   b. **Printer ID-** This field will self populate with all available printers. If a printer is connected while this menu is open, you may need to click on **Find Printers** to make it show up in this dropdown menu.

   c. **Connect to-** This field will fill itself out once you've selected a printer and clicked **Apply**.

   d. **Find Printers**- If you've plugged in a computer after loading the **Printer** page, you must click **Find Printers** to discover them.

4 Press the **Apply** button to save. The printer changes will take place immediately. No reboot is required.

5 Launching any of your local connections, such as Firefox, will be able to utilize these printer settings.

Sounds

This section allows you to adjust the master volume level for the terminal.

1. From the DeTOS Desktop, select **DeTOS→Control Panel**.
2. Click the **Sound** icon on the left-hand side of the **Control Panel** under **System**.
3. Left-click and drag the bar left or right to decrease or increase the volume.
4. Press the **Apply** button to save. Your changes will take place automatically.

5

Advanced Options

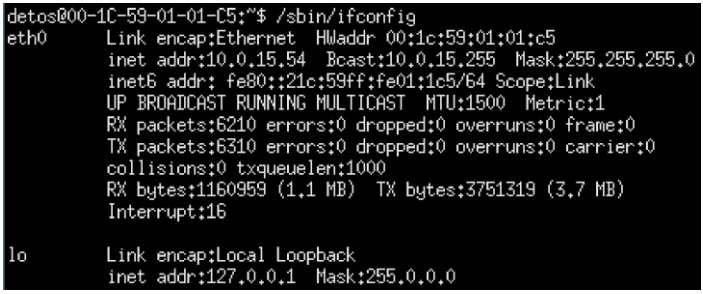
Launch Terminal

There may be times when you wish to open a Terminal window to run command-line tools only accessible from a Linux shell. To access the shell, click the button found at the top of the Control Panel named Launch Terminal.

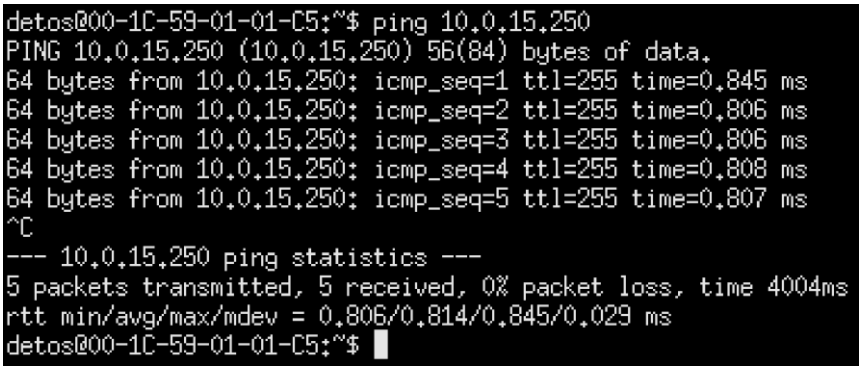
The **ifconfig** and **ping** commands are two popular Linux tools used for diagnosing network connectivity and interface settings. The following two sections describe their basic usage.

Viewing Current Network Interface Settings

Type **/sbin/ifconfig** and press <Enter> to display the status of the currently active network interfaces.


detos@00-1C-59-01-01-C5:~$ /sbin/ifconfig
eth0 Link encap:Ethernet HWaddr 00:1c:59:01:01:c5
inet addr:10.0.15.54 Bcast:10.0.15.255 Mask:255.255.255.0
inet6 addr: fe80::21c:59ff:fe01:1c5/64 Scope:Link
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:6210 errors:0 dropped:0 overruns:0 frame:0
TX packets:6310 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:1160959 (1,1 MB) TX bytes:3751319 (3,7 MB)
Interrupt:16
lo Link encap:Local Loopback
inet addr:127.0.0.1 Mask:255.0.0.0

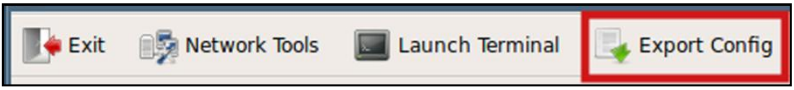
The value of inet addr, in the eth0 group of statistics, is the currently assigned IP Address of your DeTOS terminal. If DHCP was used, this is the IP address that your terminal acquired during bootup. If you configured static network settings, then this address should match the value you entered in the **IP Address** field.


detos@00-1C-59-01-01-C5:~$ ping 10.0.15.250
PING 10.0.15.250 (10.0.15.250) 56(84) bytes of data.
64 bytes from 10.0.15.250: icmp_seq=1 ttl=255 time=0.845 ms
64 bytes from 10.0.15.250: icmp_seq=2 ttl=255 time=0.806 ms
64 bytes from 10.0.15.250: icmp_seq=3 ttl=255 time=0.806 ms
64 bytes from 10.0.15.250: icmp_seq=4 ttl=255 time=0.808 ms
64 bytes from 10.0.15.250: icmp_seq=5 ttl=255 time=0.807 ms
^C
--- 10.0.15.250 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4004ms
rtt min/avg/max/mdev = 0.806/0.814/0.845/0.029 ms
detos@00-1C-59-01-01-C5:~$

Export Config

If you are working to troubleshoot a problem on your terminal, you may be asked to send your terminal's **Config** file. You can easily export your own **Config** file by following these steps:

1. Plug a USB flash drive into the terminal.
2. Click the button found along the top of the **Control Panel** named **Export Config**.



3. The process only takes a few seconds. Once it is finished you will receive a message saying the export is finished and you may

remove the flash drive.

4. A file named **detosConfig**.tar will now exist on the flash drive. This file contains important diagnostic information that can be analyzed by Acer Support and will help troubleshoot and solve issues you may be experiencing.

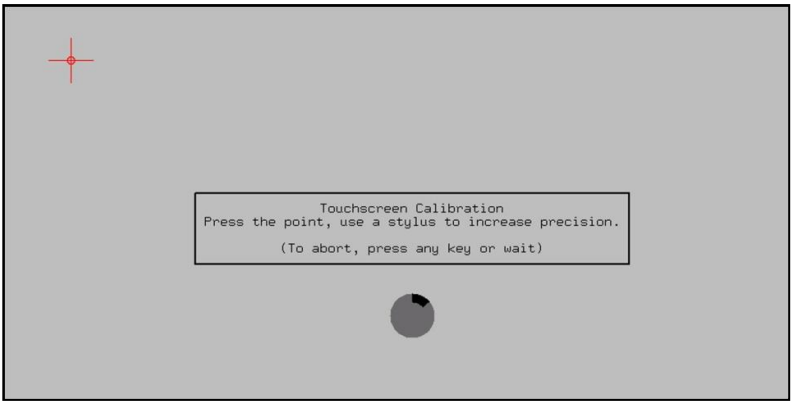
ELO Touch Screen Support

Upon connecting an ELO Touch Screen to your thin client you will be presented with a calibration screen on first boot to ensure your unit functions properly.

There are two ways to calibrate your ELO Touch Screen device when attached to your thin client.

Calibration – Option 1

Upon first boot of the operating system, you will see a gray calibration screen with a countdown timer in the middle if an ELO device is found.



Use your finger or a stylus to tap the center of the red cross that displays in the upper left-hand corner. Try to get as close as possible to the small circle in the center of the red cross.

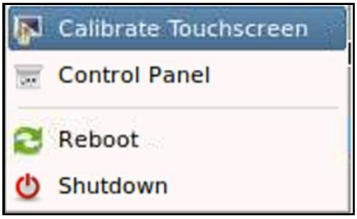
Another calibration spot will appear in the top right-hand corner. Use your finger or a stylus to tap the center of the red cross. Repeat for the calibration spots that appear in the bottom right-hand corner of the screen, and then the bottom left-hand corner of the screen.

NOTE: If the calibration is inaccurate, the calibration tool will ask you to re-try the process until a more accurate reading is achieved. You can wait until calibration is achieved or press any key to cancel the dialog at any time.

Calibration – Option 2

The second method of calibrating the hardware can be found in the DeTOS **Start Menu**. Select **Calibrate Touchscreen**. You will see the gray calibration screen.

Follow the steps from Option 1 to calibrate the touch screen.



NOTE: There is currently no way to configure the calibration of an individual device and push that setting via the Acer Echo Management Console software. Calibration files will not be persistent through rebooting, so the device must always have to be calibrated when attempting to use a touch screen device with VDI Blaster.

NOTE: Re-imaging or updating your thin client will require you to re-calibrate the device.

NOTE: If at any time the calibration seems inaccurate you can plug in a mouse and attempt to re-calibrate the device.

Manage Packages

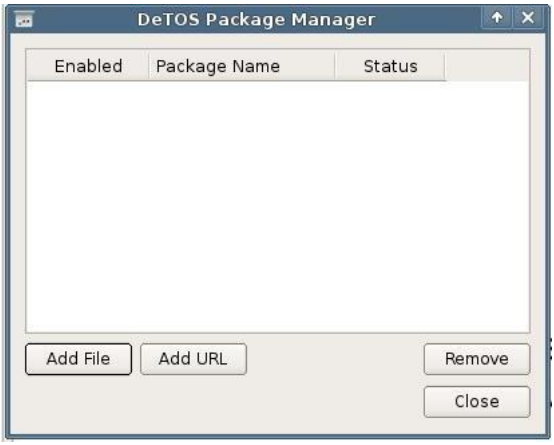
In the upper toolbar of the DeTOS Control Panel is a button that says **Manage Packages** which opens the DeTOS Package Manager. This tool can be used to enable or disable individual update packages that may be made available, as well as customization packages provided by Acer. These packages will be in a squashfs file type.

There are two methods of locating the files to be added to the list of available packages. They can be added locally using the **Add File** button, or they can be added from a remote location by clicking the **Add URL** button.

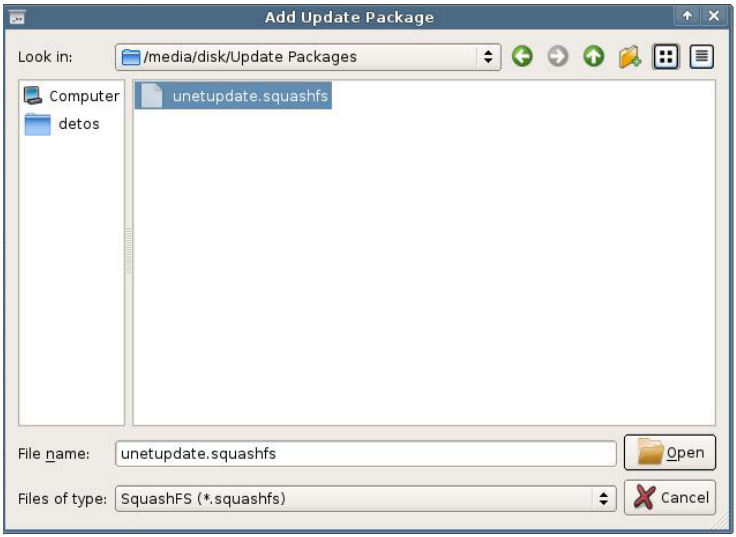
NOTE: In order for newly added packages to take effect, or for packages to be effectively enabled, disabled, or removed, you must first reboot your terminal.

To add an update package locally:

1. Click on the **Add File** button in the DeTOS Package Manager.

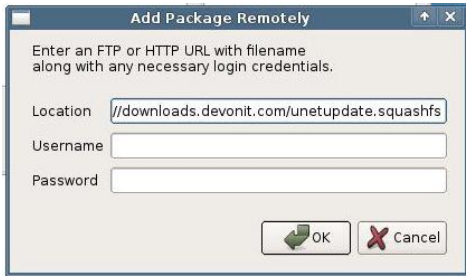


2. Navigate to the location of the update package on your system or USB key and select **Open**.



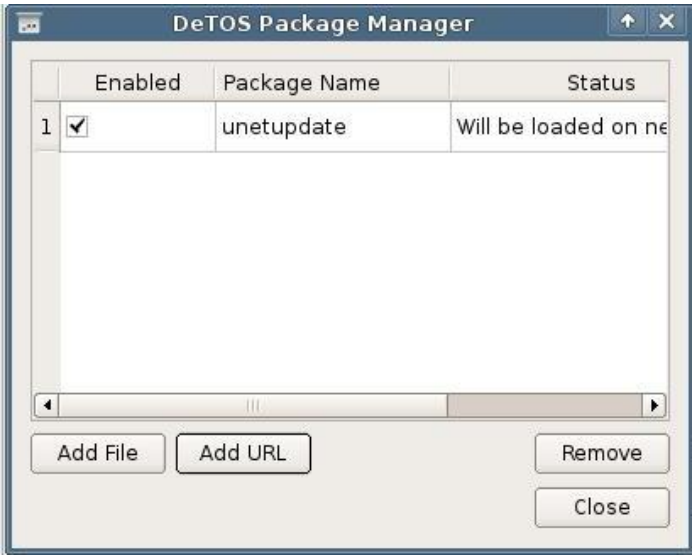
The package you have selected will now appear in the DeTOS Package Manager menu. In order to add a package that is not locally stored:

1. Click on the **Add URL** button in the DeTOS Package Manager.
2. Enter the complete URL for the location of the update package, using either FTP or HTTP protocol.



3. If necessary, enter the **Username** and **Password** needed to access the location where the file is held.
4. Click **Ok**.

The package will now appear in the DeTOS Package Manager menu.



Newly added update packages will default to the **Enabled** status. In the DeTOS Package Manager, clicking the checkbox next to a file in the table under the **Enabled** column will toggle it between being enabled or disabled. Any changes to this status require a reboot before they will take effect.

In order to completely remove a package:

1. Select the file you wish to remove from the table.

2. Click the **Remove** button.
3. A prompt will appear to ensure that this is what you want to do. Click **Confirm** to continue, or **Cancel** to back out of the process.

Once you have clicked **Confirm**, the package has been deleted. For this change to become permanent, the terminal will need to be rebooted.

6

Connections

Adding New Connections

1. From the DeTOS Desktop, select **DeTOS→Control Panel**.
2. Click the icon you wish to create; it is listed under the **Connections** bar, on the left-hand side of the **Control Panel**.
3. The main window will split into two separate frames. The top frame will list all existing connections for this particular type or protocol. To add a new connection, click the plus [+] button.
4. You will be prompted to enter a name for this connection. Enter a name for this connection and press the **OK** button to continue.
5. The bottom frame will display configuration fields that are specific to the connection type you are creating. Some connections, like Firefox Web Browser, will only have a couple of fields required for configuration and be listed on a single form. Connections that have several configuration options associated with them, like RDP and Citrix, will have their settings grouped and sorted under separate sections, called form panels. These panels can be opened and closed by clicking the plus [+] and minus [-] buttons found along the top, right-hand side of each panel box.

   NOTE: The number of form panels will vary, depending on the type of connection you are creating. Click the plus [+] or minus [-] buttons to expand and collapse these sections.

6. Once you are finished setting up your connection, click the **Apply** button along the bottom of the frame. An icon for the new session will be created on the DeTOS Desktop. The end user can double-click this icon to launch the connection.

7 As you create connections in the **Control Panel**, icons for those sessions will appear on the desktop. Double-click the icon to launch that session.

How to Rename or Delete Connections

1 From the DeTOS Desktop, select **DeTOS→ Control Panel**.

2 In the **Control Panel**, the top center panel lists your currently added connections in the **Connections window**.

3 Select the session type to view the list, and then select the specific name of the connection you want to edit.

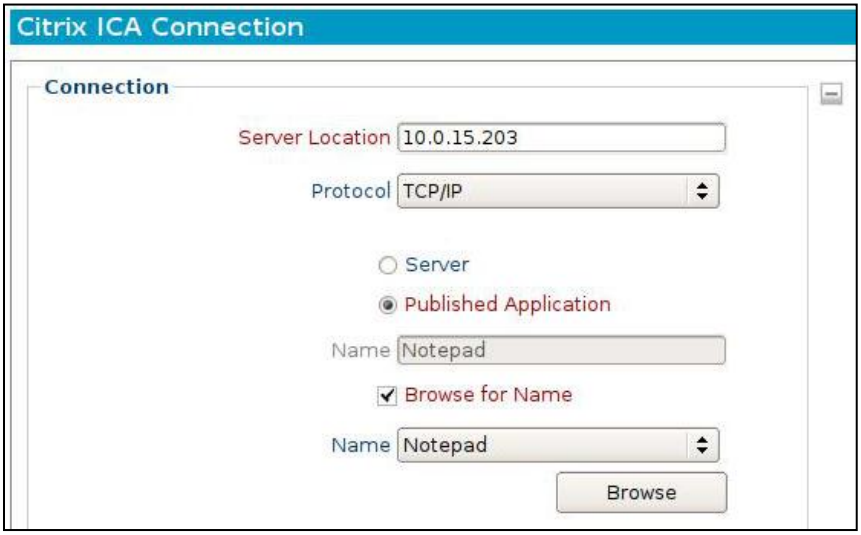
- **To Rename-**Double-click the entry. Your pointer will change to a [I] cursor and highlight the connection name, allowing you to type in a new name for this connection. Press <Enter> to save your changes.
- **To Delete-**Press the minus [-] button to remove that connection. You will be asked to confirm the removal. Click **Apply** to remove that connection completely.

Citrix ICA

The Citrix Receiver client in DeTOS allows you to connect to Citrix XenApp Servers (formerly known as Presentation Server). This Citrix client also contains the necessary plug-in used for connecting to XenDesktop via the thin client's local web browser.

The Connection Section

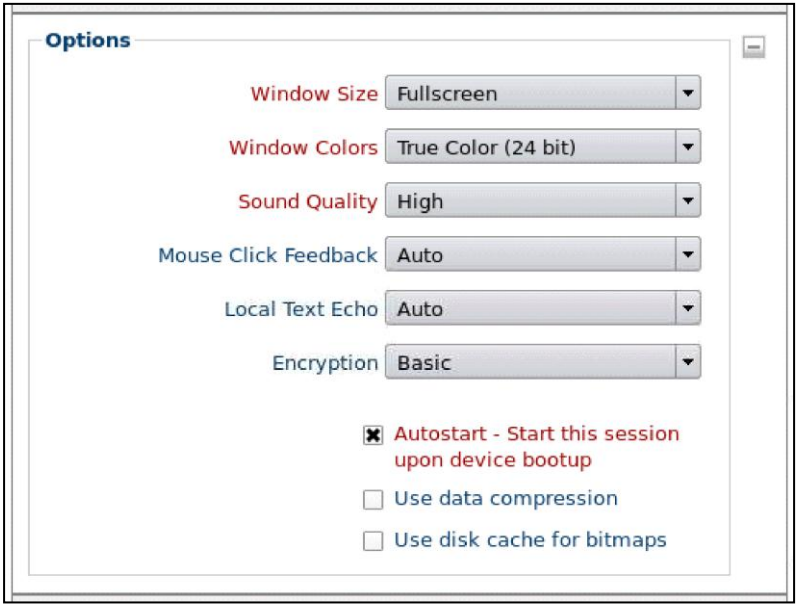
The first section displayed for a Citrix ICA session is **Connection**. This form panel will already be expanded for you.



- **Server Location-**Type in the IP address or hostname of your Citrix server.
- **Protocol-**Select the appropriate protocol needed to connect to your Citrix Server. There are two methods for connecting to your Citrix Server:
- **Server**-To connect to the desktop of your Citrix Server, click the radio button called **Server**.

- **Published Application-**To connect to a published application on your Citrix Server, select the radio button called **Published Application**.
- **Browse for Name-**Mark the checkbox called **Browse for Name**. Then click the **Browse** button once. This will contact the server and populate the list. Click the down arrow on the Name list and select your server name or published application name.

The Options Section



1 **Window Size-**Select the type of window you want your ICA session to display in.

- Full screen-The ICA session will take up the entire display.
- Fixed Size-You may select fixed sized windows, such as **640x480**, **800x600**, and **1024-x768**.
- Percentage Based-You may select a size based on the percentage of available desktop display, such as **25%**, **50%**, and **75%**.
- Seamless-When using the **Published Application** feature, you can select Seamless mode to launch Windows applications like **Notepad** directly on DeTOS, without using the Citrix Window.

2 **Windows Colors-**Color depth options are **16 colors**, **256 colors**, **16-bit**, and **24-bit**.

3 **Sound Quality-**Adjust the sound from **Low**, **Medium**, or **High Quality**.

4 **Citrix SLR (Speed Screen Latency Reduction) Options-** Enabling the following two options are usually only needed when high latency is occurring or poor bandwidth conditions exist.

- **Mouse Click Feedback-**The mouse cursor will change to an hourglass as soon as a user performs a mouse click on an event and will wait for a response from the server before it changes back.
- **Local Text Echo-**This option allows a user to see the character they type into their session on the screen, without this key press hitting the actual server at that time.

5 **Encryption-**Select the appropriate level of encryption to be used when connecting to this Citrix Server.

6 **Autostart-**Enable this checkbox to automatically launch this session each time the thin client completes its boot procedure.

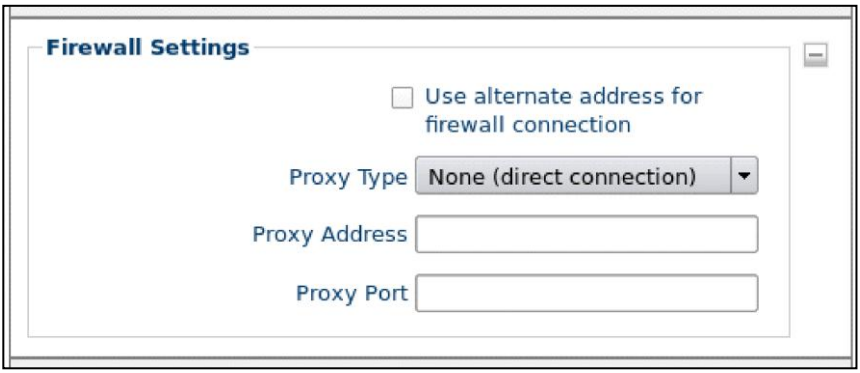
7 **Auto Restart-**Select **Yes** or **Prompt** to automatically restart the connection.

- **Yes-**Once the session is terminated, the session will automatically restart. There is no way for the end-user to stop it from occurring every time it closes.
- **Prompt-**Once the session is terminated, the user will receive a **YES/NO** prompt asking them if they wish to reconnect to the session.

8 **Use data compression-**In an environment where system and client resources are not a concern, data compression can be used to decrease the amount of data that must be sent across the network.

9 **Use disk cache for bitmaps-**Allows graphical objects to be stored in the local disk cache on the client device.

The Firewall Settings Section

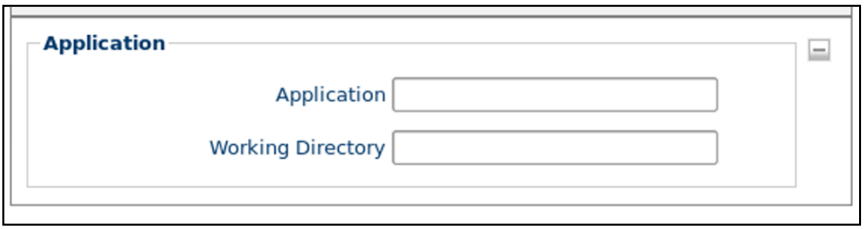


- **Use alternative address for firewall connection-**Mark this checkbox if you need the ICA session to connect to the Citrix server's external IP address. The *external* address for the server is specified as the *alternate* address.
- **Proxy Settings-**If your Citrix environment utilizes a proxy server, then choose the appropriate type from the **Proxy Type field**. Enter the address of the proxy server and port number in the **Proxy Address** and **Proxy Port** fields, respectively.

The User Log On Section

- **User Name-**Specify the name of a user account to log on as. This is an optional field.
- **Domain-**Specify the domain to log on to. This is an optional field.

The Application Section

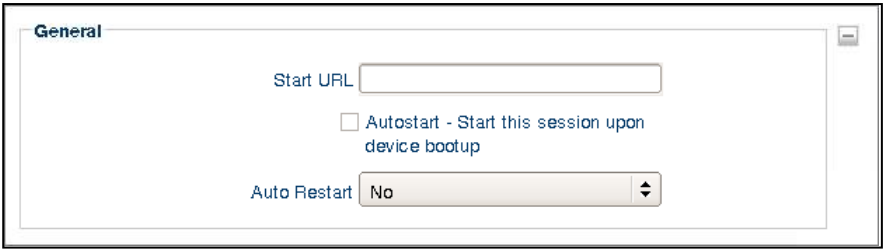


- **Application-**Specifies the path of the application on the Citrix server to be automatically launched when the connection is made. This is an optional field.
- **Working Directory-**Specifies the working directory used for the application.

Firefox Web Browser

The following section describes the steps for configuring the local Firefox web browser on DeTOS.

The General Section

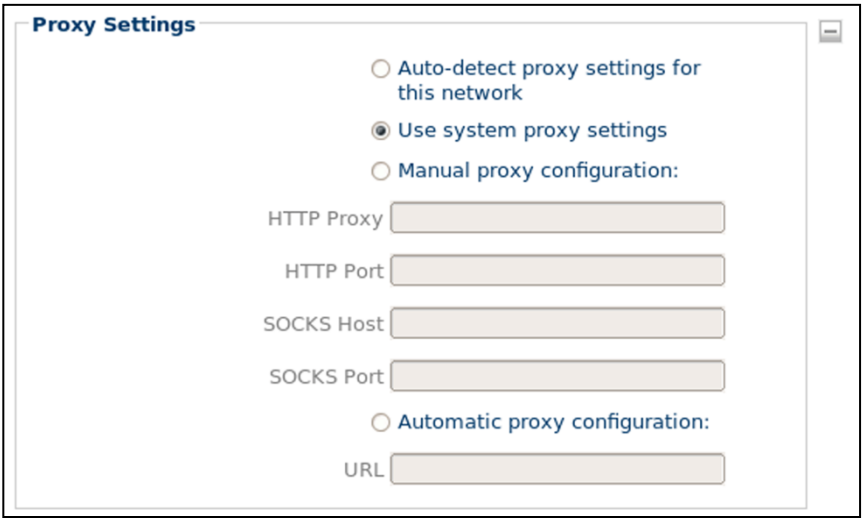


- **Start URL-**Specifies the initial web page to appear when the browser is first launched.
- **Autostart-**Enable this checkbox to automatically launch this session after the thin client completes its boot procedure.

- **Auto Restart**-Select **Yes** or **Prompt** to automatically restart the connection.
    - **Yes-**Once the session is terminated, the session will automatically restart. There is no way for the user to stop it from occurring.
    - **Prompt**- Once the session is terminated, the user will receive a **YES/NO** prompt asking them if they wish to reconnect to the session.

Click the **Apply** button to save the connection. Double-click the Firefox icon the desktop to launch the browser session. Browser plug-ins for Flash Player and Java have been pre-installed.

The Proxy Settings Section

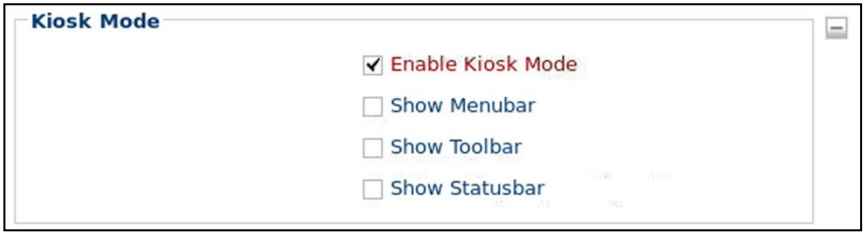


- **Auto-detect proxy settings for this network-**This option will allow Firefox to automatically detect the proxy settings for your network.

- **Use system proxy settings-**This option allows you to use the proxy settings configured for your system.
- **Manual proxy configuration**-Choose this option if you have more than one proxy server and you would like to specify which server to use. Complete these fields: **HTTP Proxy**, **HTTP Port**, **SOCKS Host**, and **SOCKS Port**.
- **Automatic proxy configuration**-If you have a proxy configuration (**.pac**) file, use this field to specify the URL address to the **.pac** file.

The Kiosk Mode Section

The Firefox web browser in DeTOS 7 includes a Kiosk Mode. When activated you can hide certain things in the web browser, like the **Address** bar, **Menu** bar, **Tool** bar, or **Status** bar.



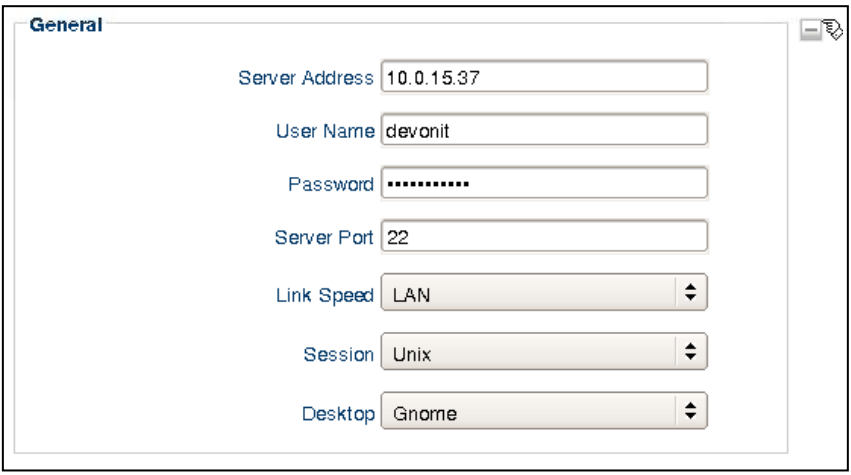
- **Enable Kiosk Mode-**This checkbox must be enabled to even view the other three options below:
  - **Show Menu** Bar-With this box checked, the **File**, **Edit**, **View**, etc. **Menu** bar will appear.
  - **Show Toolbar-**With this box checked, the user has access to the **Address** bar to change websites, and access to the **Back, Forward, Stop,** and **Refresh** buttons in the **Toolbar**, usually below the **Menu** bar.
  - **Show Status Bar-**Check this box to un-hide the internet status bar below the webpage. This is the **Status** bar that shows the progress of websites, such as **Waiting for Address, Connecting to Address,** and **Done.**

NOTE: To use Kiosk Mode correctly, make sure you have a Starting URL in the requested field. Launching Firefox in Kiosk Mode will automatically launch a Full Screen, inescapable Firefox session for end-users with Internet-ONLY access. The only way to leave the browser is to shut down the thin client.

No Machines

The following section describes the steps for configuring a No Machine connection on DeTOS.

The General Section

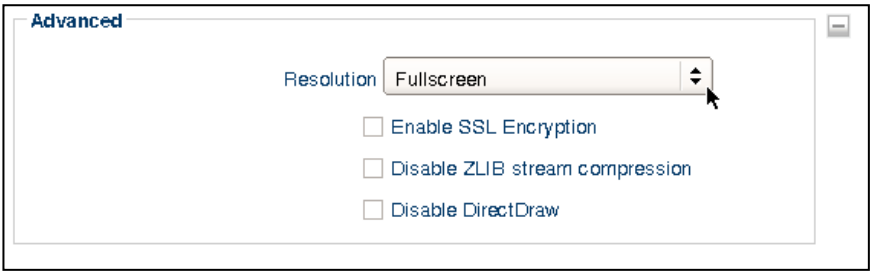


1. **Server Address-**Enter the IP Address of your No Machine server.
2. **Credentials-**Enter the User Name and Password for your No Machine session.
3. **Server Port-**This is the port number needed to connect properly to the No Machine session.
4. **Link Speed-**Choose a connection speed (this is optional).
5. **Session-**Select the desired session from the following choices:

- **Unix-** Launch an X11 desktop such as KDE, Gnome, XDM, or CDE. Or you can select **Custom** to launch a specific single application in a window.
- **Shadow-**Attach to and shadow an already running X11 session to see the display or desktop share.
- **Windows-**Run an rDesktop session on a Windows Terminal Server.
- **VNC-**Run a VNC session on a particular VNC server.

Depending on your selected session, another drop box may or may not appear requesting additional information. If launching a Unix session, you will have to confirm which Desktop to connect to. If you are launching a Windows session, you will need to supply an IP address and the Domain name. If you are launching a VNC session, you will need to supply the VNC IP Address and Display Screen. If connecting to a Shadow No Machine connection, you shouldn't have to supply any other information than the fields above.

The Advanced Section



- **Resolution-**This dropdown allows you to choose from a **Full Screen** mode or several fixed sizes.
- **Enable SSL Encryption-**By default, this box will be checked. Un-checking this box will disable **SSL Encryption**.
- **Disable ZLIB Stream Connection**-Checking this box disables ZLIB stream compression. This removes the overhead associated

with compression VPN network traffic, lowering server processor usage.

- **Disable Direct Draw**-This option is available for the No Machine client for Windows. This disables the use of the DirectDraw engine in favor of the GDI engine. This can resolve later conflicts with other Windows applications that may use DirectDraw. This also results in a much better performance using Windows Vista and 7.

VMware View

The VMware View client allows you to connect to a VMware server, which in turn, provides the end-user with their own virtual desktop session. The following section describes the basic steps for configuring the View Client in DeTOS.

1 **Server Address-**Enter the Hostname or IP address of your VMware View Broker.

2 **Credentials-**Specify the User Name and Password of a user account you wish to log on as.

3 **Domain-**Specifies the domain to log on to.

4 **Desktop Name-**If the user of this thin client should always connect to the same desktop, then you may consider entering its name into this field. If you choose to leave the field empty, then the user will be prompted to select an available desktop at the time they connect to the VMware View server.

5 **Protocol**: Choose whether to connect to your VMware View server using the RDP or PCOIP protocol.

6 **Desktop Layout**: Choose the desktop option that best suits your display setup.

7 **Autostart:**-Enable this checkbox to automatically launch this session after the thin client completes its boot procedure.

8 **Auto Restart:** Select **Yes** or **Prompt** to automatically restart the connection.

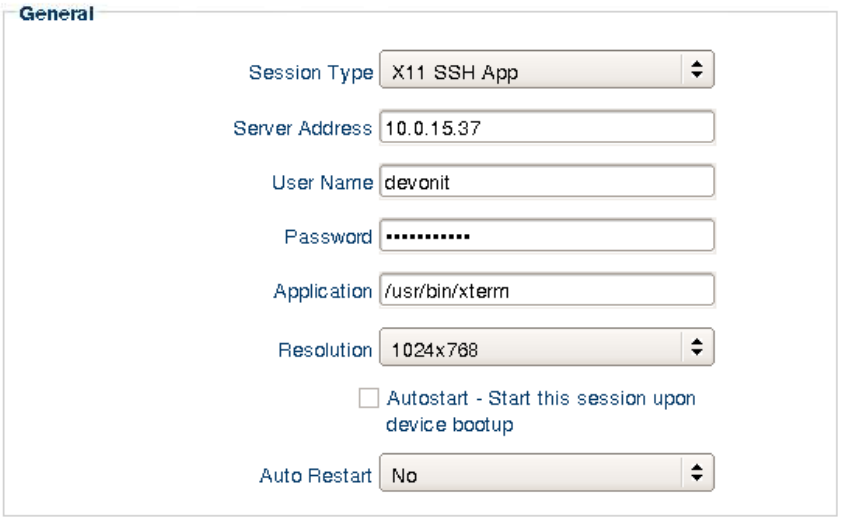
- **Yes-**Once the session is terminated, the session will automatically restart. There is no way for the user to stop it from occurring.
- **Prompt-**Once the session is terminated, the user will receive a **YES/NO** prompt asking them if they wish to reconnect to the session.

Troubleshooting Tips for VMView Connection

- If you set your session to full screen but the display covers only a fraction of the entire screen, then your allocated RAM for the virtual desktop may need to be set a little higher.
- If certain features like foreign keymaps, CD-ROM, USB stick, or printer redirection are not passing through to the virtual desktop session, check if your VM is at the correct version. You can download the latest agent software executables at VMware's website at: http://www.vmware.com/downloads.
- If you plan to use USB flash drives within your session, it is best to use sticks formatted in FAT or NTFS. Long delays sometimes occur when using flash drives formatted in FAT32. Other USB troubleshooting tips can be found at the following VMware site: http://kb.vmware.com/kb/1026991.

X11 Connection

The X11 client allows you to connect to an X11 server, which provides the user with their own virtual desktop session. The following section describes the basic steps for configuring the X11 connection in DeTOS.



1. **Session Type-**Choose from the single **SSH App** type or the **XDMCP** connection.
2. **Server Address-**Specify which IP address is the X11 server.
3. **Credentials-**Specify the User Name and Password of a user account you wish to log on as.
4. **Application-**This is the file path of the application if you are planning on launching a single application within DeTOS, using the X11 connection. This is only available when choosing the **SSH App** session type.

5 **Resolution-**Choose the resolution for your connection, ranging from full screen to various fixed resolutions.

6 **Autostart-**Enable this checkbox to automatically launch this session after the thin client completes its boot procedure.

7 **Auto Restart-**Select **Yes** or **Prompt** to automatically restart the connection.

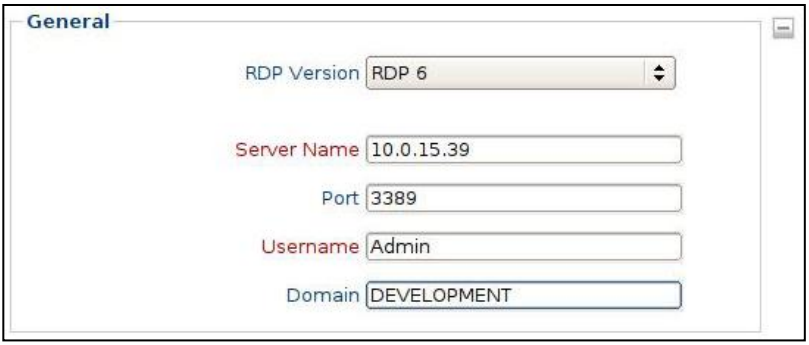
- **Yes-**Once the session is terminated, the session will automatically restart. There is no way for the user to stop it from occurring.
- **Prompt-**Once the session is terminated, the user will receive a **YES/NO** prompt asking them if they wish to reconnect to the session.

NOTE: Not all of these fields will be available to you if you chose **XDMCP** as the **Session Type**. You will not be required to supply credentials and there will be no application line. By default, **SSH App** is the **Session Type**.

rDesktop

The General Section

The first section displayed for an rDesktop session, is named General. This form panel will already be expanded for you.



1 **RDP Version-** Select whether you want to use RDP 6 or RDP 7.

NOTE: RDP.7 incorporates Microsoft's RemoteFX technology to provide better visual experiences for the user.

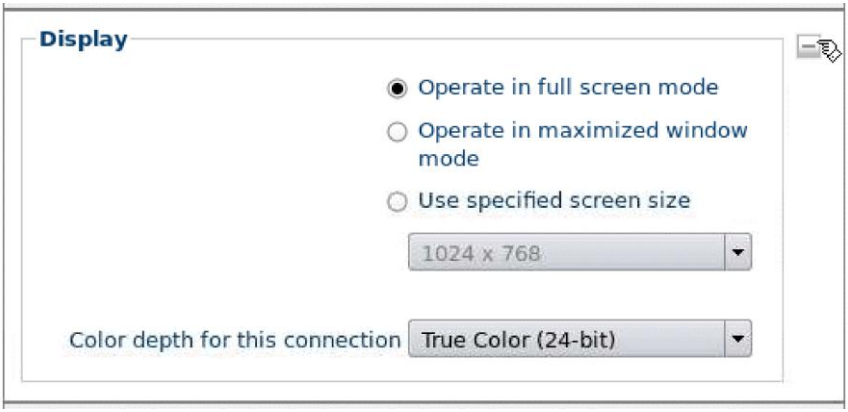
2 **Server Name-**Enter the hostname or IP address of the Windows Terminal Server.

3 **Port-** Enter the port number used in this connection.

4 **User Name-**Specifies the name of a user account to log in as. This is optional.

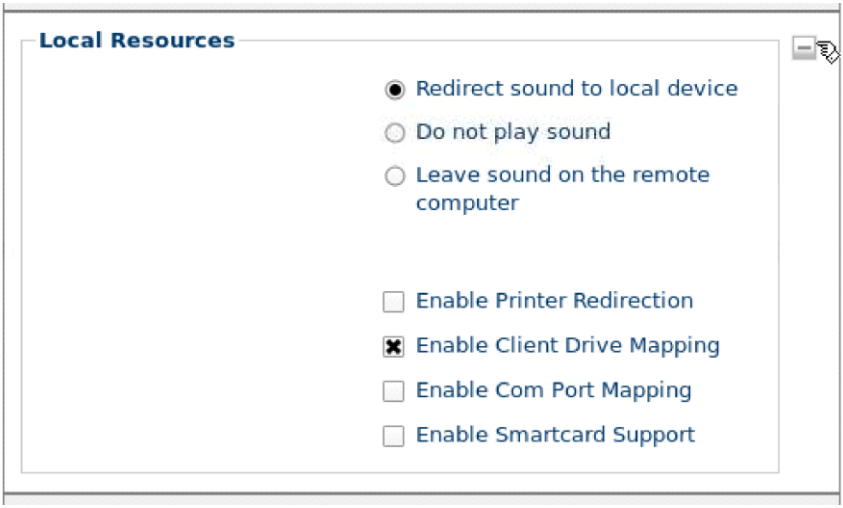
5 **Domain-**Specifies the domain to log on to.

The Display Section



- **Operate in full screen mode**-The RDP session will take up your entire display and will not allow minimization.
- **Operate in maximized window mode**-This option will display the RDP session in a window within DeTOS. You will be able to maximize and minimize this window if you want.
- **Use specified screen size**-The RDP session will launch in a fixed sized window, specified by the dimensions chosen in the dropdown list below. You can ONLY minimize this window, the fixed size is the MAX size allowed.
- **Color depth for this connection**-Select the desired color depth for this RDP session.

The Local Resources Section



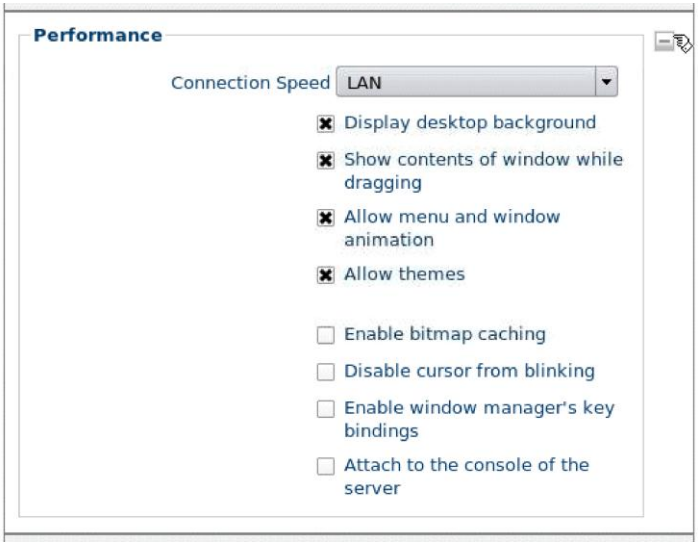
- **Sound Redirection Options**-By default, sound from the server will redirect to the local thin client. If you do not want sound to be sent to the local device, then select either the **Do not play sound** or Lea**ve sound on the remote thin client** radio buttons below **Redirect sound to local device** (selected by default).
- **Enable Printer Redirection**-Mark this checkbox to redirect printing to a printer attached the local terminal.
- **Enable Client Drive Mapping**-Allows the user plug USB Flash Drives locally into the terminal and access the contents of the drive via the RDP session.
- **Enable Com Port Mapping**-Redirects serial devices on your terminal to the server.
- **Enable Smartcard Support-**Specifies whether redirection of Smart Cards is permitted during server authentication.

NOTE: To correctly set up Printing, make sure you have also entered fields in the **Printer Name and Driver Name** fields in the **Control Panel**. This can be found in the **Printer** section, under **System Settings**.

The Start a Program Section

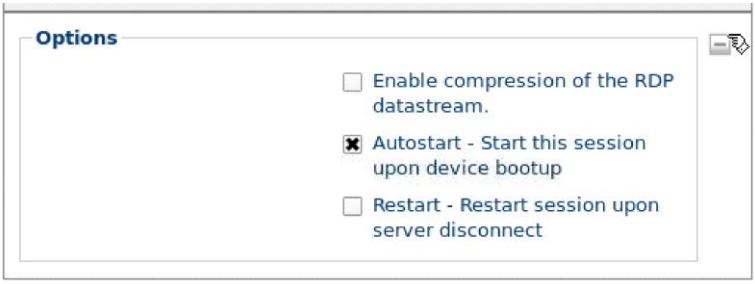
- **Program path and filename**-Specifies the path of the application on the Terminal server to be automatically launched when the connection is made. This will launch the application in a window within DeTOS, not rDesktop.
- **Working Directory-**Specifies the working directory used for the application.

The Performance Section



- **Connection Speed-**Specifies the RDP Experience. As you change connection options in this dropdown box, associated behaviors in the checkboxes below will be selected or deselected accordingly.
- **Enable bitmap caching-**Enable caching of bitmaps to disk (persistent bitmap caching).
- **Disable cursor from blinking-**Indicates that *cursor blinking* should be disabled during the RDP session.
- **Enable window manager's key bindings-**By default rDesktop attempts to grab all keyboard input when it is in focus.
- **Attach to the console of the server-**The session will connect to the console of the server (requires Windows Server 2003 or newer).

The Options Section


Options
Enable compression of the RDP datastream.
Autostart - Start this session upon device bootup
Restart - Restart session upon server disconnect

- **Enable compression of the RDP DataStream-**In an environment where system and client resources are not capable, data compression can be used to decrease the amount of data that must be sent across the network.
- **Autostart-**Enable this checkbox to automatically launch this session after the thin client completes its boot procedure.
- **Auto Restart-**Select **Yes** or **Prompt** to automatically restart the connection.
    - **Yes-**Once the session is terminated, the session will automatically restart. There is no way for the user to stop it from occurring.

- **Prompt-**Once the session is terminated, the user will receive a **YES/NO** prompt asking them if they wish to reconnect to the session.

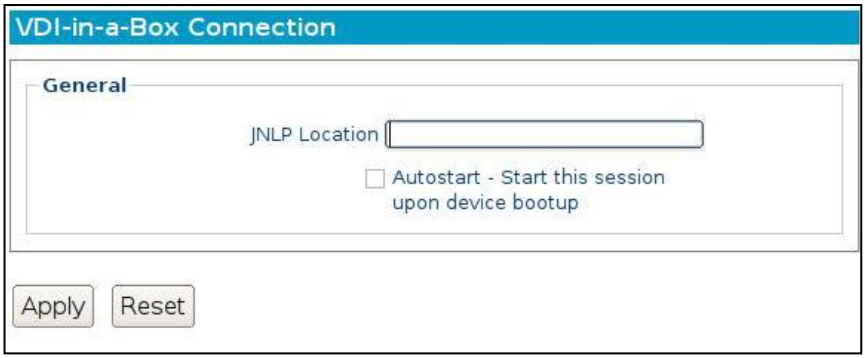
VDI In A Box

Your thin client running DeTOS comes pre-configured with Java Web Start and Citrix that enables users to creation connections to Kaviza servers. Since the client does not reside natively on the thin client, you will need a web address that points to your **kavizaclient.jnlp** file.

The General Section

You will need the location of the JNLP (Java Network Launching Protocol) which resides on your remote Kaviza server.

- **JNLP Location**-Type in the appropriate location of the **kavizaclient.jnlp** file. The typical format will look something like the following: **http://10.0.15.79/dt/kavizaclient.jnlp**.



- **Autostart**-Enable this checkbox to automatically launch this session each time the thin client completes its boot procedure.

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Getting Help

Getting the latest software and Echo Management software

Visit the website page through following http://us.acer.com/ac/en/US/content/drivers or http://www.devonit.com/acer, to get the latest software for clients and the latest Echo Management software for server.